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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/464,890 12/16/99 SHIBA

N SAT-38

020311
BIERMAN MUSERLIAN AND LUCAS
600 THIRD AVENUE
NEW YORK NY 10016

MMC2/0301

EXAMINER

RO, B

ART UNIT

PAPER NUMBER

2837

DATE MAILED:

03/01/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	09/464,890	Applicant(s)	Shiba et al
Examiner	Bentsu Ro	Group Art Unit	2837

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- Responsive to communication(s) filed on _____
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- Claim(s) 1-4 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- Claim(s) _____ is/are allowed.
- Claim(s) 1-4 is/are rejected.
- Claim(s) _____ is/are objected to.
- Claim(s) _____ are subject to restriction or election requirement

Application Papers

- The proposed drawing correction, filed on _____ is approved disapproved.
- The drawing(s) filed on _____ is/are objected to by the Examiner
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

All Some* None of the:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____
- Copies of the certified copies of the priority documents have been received
in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). 3 Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892 Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948 Other _____

Office Action Summary

FIRST OFFICE ACTION

1. Drawing correction is required. Applicant should label Fig. 6 as "prior art".
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belson et al US Patent No. 3,644,806 or Belson et al in view of applicant acknowledged prior art Fig. 6 teaching.

Applicant acknowledged Fig. 6 "prior art" teaches a master motor M_m and slave motor M_{s1} , master section controller Am , slave section controller $As1$, and origin detectors Km , $Ks1$, etc.

Applicant's invention over prior art is to replace the origin detector with a phase detector from the encoder, for example, a z-phase pulse is outputted from the encoder for each motor. The z-phase pulses are used for motors synchronization control.

Belson et al teach basically a similar subject matter as claimed. For example, Belson's Fig. 2 teaches:

- a tachometer 25, which could be read as a "master rotational frequency detection means"; a position transducer 21 which is a master phase detection means;
- a tachometer 27, which could be read as a "slave rotational frequency detection means"; a position transducer 23 which is a slave phase detection means;
- two amplifiers 51, 52, and a phase comparator 53 which together constitute a phase deviation detection means;
- summing junctions 43, 45 and amplifiers 39, 41 perform synchronization control.

With respect to the claims (take claim 1 for example), Belson et al do not teach "master" section and "slave" section. However, any one of the motor control sections can be a master section and the other one a slave section.

The most important feature of applicant's invention is to use a phase difference as an error for synchronization control. Belson et al basically teach the same phase difference error for synchronization control. These claims are therefore considered not patentable over Belson et al teaching alone or Belson et al teaching in view of applicant acknowledged Fig. 6 prior art teaching.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number (703) 308-3656.

February 27, 2001

Bentsu Ro
BENTSU RO
PRIMARY EXAMINER